

Abstract of the Disclosure

The invention is directed to a flexible pipe connecting unit which includes a part made of elastic workable material. The pipe connecting unit includes a wave-shaped or hose-shaped bellows (4) made of elastomeric material. The bellows (4) has respective projecting flange collars (14; 14a, 14b) at its respective ends. The flange collars (14; 14a, 14b) preferably are provided with a reinforcement insert (16; 16a, 16b) and annular-shaped pipe connecting pieces (flanges 18; 18a, 18b) are disposed behind corresponding ones of the flange collars. The pipe connecting unit (2) coacts directly with weld-on flanges as counter flanges (20; 20a, 20b) without additional seals or corresponding joining locations. For this purpose, the end sealing faces of the flange collars (14; 14a, 14b) are partitioned in the radial direction by a peripherally extending slot (28; 28a, 28b). In this way, at least two coaxial concentric annular-shaped sealing surfaces (14-I, 14-II) are formed. With outer weld-on or slip-on flanges (20; 20a, 20b), only corresponding ones of the outer annular sealing surfaces (14-I) are in contact engagement and, when the counter flange (20; 20a, 20b) is a welding-neck flange, at least the outer sealing annular surface (14-I) comes into contact engagement. A stabilization ring (32) can be implanted in the slot (28; 28a, 28b) of the flange collar (14; 14a, 14b) between the outer annular sealing surface (14-I) and the inner annular sealing surface (14-II).